

80/1576488
 MAILING RECEIPT PTO 20 APR 2006
 Atty. Dkt. No. 054821-0548

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Petersen, et al.

Title: BATTERY PASTE MATERIAL
AND METHOD

Appl. No.: To be determined

Filing Date: 04/21/2006

Examiner: To be determined

Art Unit: To be determined

CERTIFICATE OF EXPRESS MAILING
 I hereby certify that this correspondence is being deposited with the
 United States Postal Service's "Express Mail Post Office To
 Addressee" service under 37 C.F.R. § 1.10 on the date indicated
 below and is addressed to: Commissioner for Patents, P.O. Box
 1450, Alexandria, VA 22313-1450.

EL 979072791 US 04/20/06
 (Express Mail Label Number) (Date of Deposit)

Roberta A. Cooper

(Printed Name)

Roberta A. Cooper
 (Signature)

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Mail Stop PCT
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to
 Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being
 submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not
 intended as an admission that such document constitutes prior art against the claims of the
 present application or that such document is considered material to patentability as defined in
 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be
 appropriate to antedate or otherwise remove as a competent reference any document which is
 determined to be a *prima facie* art reference against the claims of the present application.

100576827

U.S. Patent and Trademark Office 20 APR 2006

Atty. Dkt. No. 054821-0548

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the date of entry of the national stage as set forth in 37 CFR §1.491.

RELEVANCE OF EACH DOCUMENT

A copy of the European Search Report is attached setting forth the portion of each document listed on the Search Report considered relevant by the examiner. Also, the relevance of the foreign-language documents is described in English-language abstracts for the documents provided herewith. English-language counterparts of the foreign-language documents have not been provided. However, the absence of such translation does not relieve the PTO from its duty to consider the submitted foreign language documents (37 CFR §1.98 and MPEP §609).

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 06-1447.

Respectfully submitted,

Date 4/20/2006

By 

FOLEY & LARDNER LLP
Customer Number: 26371
Telephone: (313) 234-7150
Facsimile: (313) 234-2800

Marcus W. Sprow
Attorney for Applicant
Registration No. 48,580

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known 1576427	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	To Be Determined
Date Submitted: April 20, 2006 (use as many sheets as necessary)				Filing Date	04/20/2006
Sheet	1	of	12	First Named Inventor	Ralph Peterson
				Group Art Unit	To Be Determined 1795
				Examiner Name	To Be Determined Kalafut
				Attorney Docket Number 054821-0548	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
/SK/	A1	6,755,874	B2	Chen et al.	06-29-2004
	A2	6,454,977	B1	Kwok et al.	09-24-2002
	A3	6,442,811	B1	Dawood et al.	09-03-2002
	A4	6,274,274	B1	Schaeffer et al.	08-14-2001
	A5	6,168,661	B1	Dinkelman	01-02-2001
	A6	6,014,798		Nitsche et al.	01-18-2000
	A7	5,998,062		Olson	12-07-1999
	A8	5,958,621		Kao	09-28-1999
	A9	5,871,862		Olson	02-16-1999
	A10	5,660,600		Vyas	08-26-1997
	A11	5,447,809		Hafner et al.	09-05-1995
	A12	5,443,601		Doeff et al.	08-22-1995
	A13	5,382,482		Suga et al.	01-17-1995
	A14	5,368,961		Juergens	11-29-1994
	A15	5,302,476		Kao et al.	04-12-1994
	A16	5,290,359		Coonen et al.	03-01-1994
	A17	5,273,554		Vyas	12-28-1993
	A18	5,252,105		Witherspoon et al.	10-12-1993
	A19	5,198,313		Juergens	03-30-1993
	A20	5,120,620		Nelson et al.	06-09-1992
	A21	5,096,611		Matthew et al.	03-17-1992
	A22	5,092,404		Falsk et al.	03-03-1992
	A23	5,091,273		Hug et al.	02-25-1992
	A24	5,047,300		Juergens	09-10-1991
	A25	5,045,086		Juergens	09-03-1991
	A26	5,021,166		Torpey	06-04-1991
	A27	5,002,700		Otagawa et al.	03-26-1991
	A28	4,902,532		Seo	02-20-1990
	A29	4,900,643		Eskra et al.	02-13-1990
	A30	4,867,886		Botkins, Jr.	09-19-1989
	A31	4,780,379		Puester	10-25-1988
	A32	4,758,372		Eirich et al.	07-19-1988
	A33	4,707,272		Kistler	11-17-1987
	A34	4,705,602		Dahl	11-10-1987
	A35	4,697,511		Davis et al.	10-06-1987
	A36	4,656,706		Mahato et al.	04-14-1987
	A37	4,648,177		Uba et al.	03-10-1987
	A38	4,637,966		Uba et al.	01-20-1987
	A39	4,618,478		McKinney	10-21-1986
	A40	4,606,982		Nelson et al.	08-19-1986
/SK/					

Examiner Signature	/Stephen Kalafut/	Date Considered	03/05/2008
--------------------	-------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	To Be Determined
Date Submitted: April 20, 2006		Filing Date	04/20/2006
(use as many sheets as necessary)		First Named Inventor	Ralph Peterson
Sheet	2	Group Art Unit	To Be Determined
	of	Examiner Name	To Be Determined
	12	Attorney Docket Number	054821-0548

U.S. PATENT DOCUMENTS

U.S. Patent Document			
/SK/	A41	4,551,401	Wilson
	A42	4,547,443	Rowlette et al.
	A43	4,501,669	Hakansson et al.
	A44	4,475,453	Davis
	A45	4,422,917	Hayfield
	A46	4,421,832	Uba
	A47	4,415,410	Reich
	A48	4,414,295	Uba
	A49	4,407,911	Hooke
	A50	4,388,210	Parker
	A51	4,387,142	Lindholm et al.
	A52	4,383,011	McClelland et al.
	A53	4,346,151	Uba et al.
	A54	4,346,022	Wolcott et al.
	A55	4,326,017	Will
	A56	4,324,768	Sugahara et al.
	A57	4,323,470	Mahato et al.
	A58	4,315,829	Duddy et al.
	A59	4,232,100	Magnusson et al.
	A60	4,212,179	Juergens
	A61	4,143,218	Adams et al.
	A62	4,140,589	Hradcovsky et al.
	A63	4,110,519	Nilsson
	A64	4,064,725	Hug et al.
	A65	4,050,482	Ching et al.
	A66	4,024,055	Blann
	A67	4,020,882	Foulkes
	A68	4,019,431	Bastgen
	A69	3,974,026	Emson et al.
	A70	3,951,688	Pankow et al.
	A71	3,942,433	Wohlfarter
	A72	3,899,349	Yarnell
	A73	3,894,886	Pankow et al.
	A74	3,887,693	Escribano Nevada et al.
	A75	3,770,507	Weissman et al.
	A76	3,765,943	Biagetti
	A77	3,747,560	Roberts et al.
	A78	3,734,694	McCoy
	A79	3,702,265	Snyder et al.
	A80	3,480,478	Sohn et al.
	A81	3,449,166	Jache
	A82	3,419,431	Michaels
/SK/	A83	3,398,024	Barnes et al.

Examiner Signature	/Stephen Kalafut/	Date Considered	03/05/2008
-----------------------	-------------------	--------------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Standard ST.1.3). For Japanese patent documents, the indication of the year or the reign of the Emperor must precede the serial number of the patent document. ⁶Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: April 20, 2006 (use as many sheets as necessary)				Application Number Filing Date First Named Inventor Group Art Unit Examiner Name	To Be Determined 04/20/2006 Ralph Peterson To Be Determined To Be Determined See page 1.
Sheet	3	of	/ 12	Attorney Docket Number	054821-0548

U.S. PATENT DOCUMENTS				
		U.S. Patent Document		
/SK/	A84	3,384,458	McCarthy et al.	05-21-1968
	A85	3,252,764	Bruno, Jr.	05-24-1966
	A86	3,194,685	Malloy	07-13-1965
	A87	3,186,871	Donohue	06-01-1965
	A88	3,169,890	Voss et al.	02-16-1965
	A89	3,104,946	Veal	09-24-1963
	A90	3,001,013	Stanton	09-19-1961
	A91	2,717,903	Ruth	09-13-1955
	A92	2,182,479	Johnstone	12-05-1939
V	A93	2,165,944	Scott	07-11-1939
	A94	2,159,226	Reid	05-23-1939
/SK/	A95	1,572,586	Weir	02-09-1926

U.S. PATENT APPLICATION DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Application Document		Name of Patentee or Applicant of Cited Document	Filing Date of Cited Document MM-DD-YYYY
		Serial Number	Kind Code ² (if known)		
/SK/	A96	2004/0234852	A1	Klein et al.	11-25-2004
/SK/	A97	2004/121233		Klein et al.	06-24-2004
/SK/	A98	2002/0124388	A1	Chen et al.	09-12-2002

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY
		Office ³	Number ⁴		
/SK/	A99	EP	1 261 049	A1 Chen et al.	11-27-2002
	A100	EP	0707718	Preuss	04-24-1996
	A101	EP	196507	Kistler	10-08-1986
	A102	ES	8801559	Rheinmetall GMBH (DE)	04-01-1988
	A103	FR	723018	Thomson	04-01-1932
	A104	GB	1014694	Barnes et al.	12-31-1965
	A105	JP	63-269456	Morimoto	11-07-1988
	A106	JP	59-101773	Tamaru	06-12-1984
	A107	JP	58-147961	Satou	09-02-1983
V	A108	WO	2004/059772	A2 Klein	07-15-2004
	A109	WO	02/069418	A1 Nitsche et al.	09-06-2002
/SK/	A110	WO	8200258	A1 Koczka et al.	02-04-1982

NON PATENT LITERATURE DOCUMENTS

Examiner Signature	/Stephen Kalafut/	Date Considered	03/05/2008
--------------------	-------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	To Be Determined
Date Submitted: April 20, 2006 (use as many sheets as necessary)				Filing Date	04/20/2006
Sheet	4	of	12	First Named Inventor	Ralph Peterson
				Group Art Unit	To Be Determined
				Examiner Name	To Be Determined See page 1.
				Attorney Docket Number	054821-0548

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
/SK/	A111	International Search Report for PCT/US2004/034710, date of mailing 03/24/05, 3 pages.	
/SK/	A112	PAVLOV D et al.: "Influence Of Paste Composition And Curing Program Used For The Production Of Positive Plates With PbSnCa Grids On The Performance Of Lead Acid Batteries", Journal Of Power Sources, Elsevier Sequoia S.A. Lausanne, Cr, Vol. 114, No. 1, 25 February 2003, Pages 137-159	
/SK/	A113	DREJER I et al.: "Investigation On Soaking And Formation Of Lead/Acid Battery Plates With Different Mass Structure", Journal Of Power Sources, Elsevier Sequoia S.A. Lausanne, Cr, Vol. .85, No. 1, January 2000 (2000-01), pages 117-139	
/SK/	A114	VILDUNEN J K et al.: "Processes During Preparation Of Lead/Acid Battery Positive Plates From Tetrabasic Lead Sulfate (4bs) Pastes", Journal Of Power Sources, Elsevier Sequoia S.A. Lausanne, Ch, Vol. 46, No. 2/3, 1 October 1, 1993 pages 269-283	
/SK/	A115	GRUGEON-DEWAELE, S., LARUELLE, S., JOLIVEAU-VALLAT, F., TORCHEUX, DELAHAYE-VIDAL, A., "Synthesis and Electrochemical Performances of Tribasic and Tetrabasic Lead Sulfates Prepared by Reactive Grinding", Journal of Power Sources 72, 1998, pages 126-131. (no month)	
/SK/	A116	VILHUNEN, J.K., HORNYTZKYJ, S. and TUMMAVUORI, J. "The Influence of the Raw Material and Production Method on the Morphology, Microstructure, Chemical and Phase Composition of Tetrabasic Lead Sulfate Pastes", Journal of Power Sources, Volume 39, 1992, pages 59-65. (no month)	
/SK/	A117	PAVLOV, D. and KAPKOV, N., "Lead-Acid Battery Pastes Containing 4PbO - PbSO ₄ and Pb ₃ O ₄ ", J. Electrochemical Society, Volume 137, No. 1, January 1990, pages 16-28.	
/SK/	A118	YARNELL, C.F. and WEEKS, M.C., "The Oxidation of Tetrabasic Lead Sulfate to Lead Dioxide in the Positive Plate of the Lead-Acid Battery", Journal of the Electrochemical Society, January 1979, Vol. 126, No. 1, pp. 7-11.	
/SK/	A119	MCCABE, W.L. and SMITH, J.C., "Unit Operations of Chemical Engineering" third edition, McGraw-Hill Book Company, 1976, 5 pages. (no month)	
/SK/	A120	PAVLOV, D. and PAPAZOV, G., "Dependence of the Properties of the Lead-Acid Battery Positive Plate Paste on the Processes Occurring During Its Production" Journal of Applied Electrochemistry, Volume 6, No. 4, July 1976, pages 339-345.	
/SK/	A121	BIAGETTI, R.V. and WEEKS, M.C., "Tetrabasic Lead Sulfate as a Paste Material for Positive Plates", Bell System Technical Journal, September 1970, Vol. 49, No. 7, pp. 1305-1319.	
/SK/	A122	BURBANK, J., "Anodic Oxidation of the Basic Sulfates of Lead" Journal of the Electrochemical Society, Volume 113, No. 1, January 1966, pages 10-14.	

Examiner Signature	/Stephen Kalafut/	Date Considered	03/05/2008
--------------------	-------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbol as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.